

Appl. No. 09/955,555
Amdt. dated October 8, 2003
Reply to Office Action of April 4, 2003

Amendments to The Claims:

The claims as currently presented and under consideration, are presented below for the Examiner's convenience and to comply with 37 CFR §1.121. This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A composition comprising one or more enzymes non-covalently bound to a peptide backbone, wherein at least one of said enzymes is heterologous to said peptide backbone and said peptide backbone is capable of having bound thereto a plurality of enzymes, wherein said enzyme non-covalently bound to said peptide backbone is capable of catalytic activity, and wherein said peptide backbone comprises an amino acid sequence as shown in SEQ ID NO:29.
2. (Original) The composition according to claim 1, comprising at least two enzymes non-covalently bound to said peptide backbone.
3. (Original) The composition according to claim 1, wherein said one or more enzyme comprises protease, cellulase, lipase, peroxidase, xylanase, oxidase, esterase, oxidoreductase, laccase, lactase, lyase, polygalacturonase, β -galactosidase, glucose isomerase, β -glucoamylase, α -amylase, NADH reductase or 2,5DKG reductase.
4. (Original) The composition according to claim 1, wherein said peptide backbone comprises scaffoldin derived from a microorganism which produces a cellulosomal or amylosomal complex.
5. (Original) The composition according to claim 4, wherein said scaffoldin is derived from *Clostridium* sp. and comprises at least one internal repeating element and at least one cellulose binding domain.
6. (Original) The composition according to claim 1, wherein said enzyme is non-covalently bound to said peptide backbone by means of a dockerin region of said

enzyme.

7. (Original) The composition according to claim 6 wherein said dockerin region comprises a dockerin derived from *Clostridium* sp. or a derivative thereof capable of non-covalently binding to said peptide backbone.

8. (Original) The composition according to claim 6 wherein said dockerin comprises an amino acid sequence according to the sequence of CelS or CelD as shown in Figure 1.

9. Cancelled.

10. Cancelled.

11. (Original) The composition according to claim 5, wherein said scaffoldin comprises a plurality of internal repeating elements.

12. (Original) The composition according to claim 11, wherein said heterologous enzyme further comprises a dockerin region capable of binding with said scaffoldin protein.

13. (Currently Amended) The composition according to claim 12, wherein said dockerin region forms a non-covalent bond with said internal repeating elements units.

14. (Original) A composition comprising a scaffoldin protein bound to a heterologous enzyme.

15. (Original) A composition comprising an array of enzymes bound to a peptide backbone, wherein said composition is produced by a process comprising:

- (a) expressing DNA encoding said peptide backbone in a microorganism having been transformed with DNA encoding said peptide backbone;
- (b) expressing DNA encoding said enzyme in a microorganism having been transformed with DNA encoding said enzyme; and

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(c) binding said expressed peptide backbone to said expressed enzyme, wherein said enzyme is heterologous to said peptide backbone.

16. (Currently Amended) A composition comprising an enzyme bound to a peptide backbone, wherein said composition is produced by a process comprising combining said peptide backbone with said enzyme enzymatic activity under conditions suitable to allow a non-covalent bond to form between said peptide backbone and said enzyme enzymatic activity, wherein said enzyme retains enzymatic activity is retained subsequent to said combination.

17 – 29. Cancelled.